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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/554,248

10/25/2005

Yasuharu Koyata

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EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT

PAPER NUMBER

2828

MAIL DATE

DELIVERY MODE

06/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,248

Applicant(s)

KOYATA ET AL.

Examiner

ARMANDO RODRIGUEZ

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 12-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10-25-05, 2-9-06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the liquid crystal material of claim 20 and digital reflecting means of claim 21 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-9, 11, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chwalck (US 5,418,802).

Regarding claim 1, 6, 11, 17,

Figures 5A and 5B illustrate a wavelength converting laser device including a laser diode (1), a resonator having a pair of reflector (3) and reflecting surface (7) and a wavelength converter (19). Column 4 lines 54-60 discloses the transverse mode (TM). Column 5 lines 52-54, discloses the reflecting surface (7) operating at optimum conditions, which implies reducing loss.

Regarding claim 2,

Figures 5A and 5B illustrates the reflecting surface (7) parallel to the wavefront.

Regarding claim 5,

Figures 5A and 5B illustrates the reflecting surface (7) as Bragg grating integrated with the wavelength converter (19).

Regarding claim 7,

Figures 5A and 5B illustrates the wavelength converter (19) including a waveguide (4).

Regarding claims 8, 9,

Figures 5A and 5B illustrates the wavelength converter (19) as an QPM periodically poled structure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chwalck (US 5,418,802) in view of Geiger (US 5,117,126).

Chwalck does illustrate in figures 5A and 5B a wavelength converter (19) made of LiNbO_3 .

Chwalck is silent as to the wavelength converter being made of Mg: LiNbO_3 .

However, it is well known in the art to use wavelength converters made of Mg: LiNbO_3 , as disclosed by Geiger in column 6 lines 39-42.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chwalck (US 5,418,802) in view of Papuchon et al (US 5,128,948).

Chwalck does disclose in figure 5A and 5B a wavelength converting laser device, but is as to the laser producing a green light.

However, it is notoriously well known for wavelength conversion laser devices to produce green light as disclosed by Papuchon et al (US 5,128,948).

Art Unit: 2828

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chwalck (US 5,418,802) in view of Byer et al (US 4,809,291).

Chwalck does disclose in figure 5A and 5B a wavelength converting laser device, but is as to the laser producing a blue light.

However, it is notoriously well known for wavelength conversion laser devices to produce green light as disclosed by Byer et al (US 4,809,291).

Claims 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chwalck (US 5,418,802) in view of Yagyu (US 5,856,814).

Chwalck does disclose in figure 5A and 5B a wavelength converting laser device, but is silent as to modulating the beam using a liquid crystal modulator or a digital reflecting means.

However, it is notoriously well known in the art to modulate the light using liquid crystal modulators or digital reflecting means, as described by Yagyu.

Allowable Subject Matter

Claims 3, 4, 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARMANDO RODRIGUEZ whose telephone number is 571-272-1952. The examiner can normally be reached on 9:00 AM - 5:00 PM.

Art Unit: 2828

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ARMANDO RODRIGUEZ
Primary Examiner
Art Unit 2828

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